



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D135-1027-143
Job Sheet 196580



Part No: D135-1027-143

Job Qty: 1 pcs

Part Name: H135/EC135 - FWD Crosstube - Mid Height



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/17/19

Job Tracking No:

Due Date: 7/2/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: D135-1027-143 REV.B IPP REV:A 17.09.08 NEW ISSUE DD VERF:DP IPP REV:B 18.11.08 AS PER DWG
REV.B DD VERF:JFS

Ship Via:

Chapman
see attachment
DAS 21 9-89 Rate updated

DAS
35
9-89

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Crosstubes - 1	1 pcs	7/2/19		0.00	0.25	Crosstubes - 1		
							Crosstubes - 2		
							Crosstubes - 3		
							Crosstubes - 4		AS 19-6-21
110	QC 7	1 pcs	7/2/19		0.00	0.00	QC 7 - 10		
							QC 7 - 13		
							QC 7 - 14		
							QC 7 - 15		
							QC 7 - 17		
							QC 7 - 18		
							QC 7 - 19		
							QC 7 - 2		
							QC 7 - 28		
							QC 7 - 3		
							QC 7 - 30		
							QC 7 - 34		
							QC 7 - 36		
							QC 7 - 37		
							QC 7 - 41		AS 19-6-21
							QC 7 - 47		
							QC 7 - 48		
							QC 7 - 51		
							QC 7 - 58		
							QC 7 - 59		
							QC 7 - 60		
							QC 7 - 9		
							QC 7 - 68		
							QC 7 - 50		
							QC 7 - 67		
							QC 7 - 40		



Container No: S192782



Part: D135-1027-143

Job No: 196580

Serial No/Batch: S192782

Revision: B

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			QC 7 - 24		
			QC 7 - 43		
120 Handfinish - 4-1-Assembly-B4B	1 pcs	7/2/19	0.00 0.25	Handfinish - 4 - 1 - B4B	
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	• A2 19-6-21
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
140 Spray Paint - 2 - B4B	1 pcs	7/2/19	0.00 1.00	Spray Paint - 1 - B4B	• RD 19-6-23
				Spray Paint - 2 - B4B	
				Spray Paint - 3 - B4B	
				Spray Paint - 4 - B4B	
150 QC 14	1 pcs	7/2/19	0.00 0.00	QC 14 - 15	
				QC 14 - 2	
				QC 14 - 34	
				QC 14 - 41	
				QC 14 - 51	
				QC 14 - 58	
				QC 14 - 59	
				QC 14 - 9	
				QC 14 - 68	JUN 26 2019 68
				QC 14 - 40	9-89
				QC 14 - 19	
				QC 14 - 43	
				QC 14 - 24	
155 Handfinish - 4-2-Assembly-B4B	1 pcs	7/2/19	0.00 0.67	Handfinish - 4 - 1 - B4B	
				Handfinish - 4 - 10 - B4B	• RD 19-7-2
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
160 QC 7	1 pcs	7/2/19	0.00 0.00	QC 7 - 10	
				QC 7 - 13	
				QC 7 - 14	
				QC 7 - 15	
				QC 7 - 17	
				QC 7 - 18	
				QC 7 - 19	
				QC 7 - 2	
				QC 7 - 28	
				QC 7 - 3	
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				QC 7 - 30	
				QC 7 - 34	
				QC 7 - 36	
				QC 7 - 37	
				QC 7 - 41	
				QC 7 - 47	
				QC 7 - 48	
				QC 7 - 51	
				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	
				QC 7 - 9	
				QC 7 - 68	
				QC 7 - 50	
				QC 7 - 67	
				QC 7 - 40	
				QC 7 - 24	
				QC 7 - 43	
170	Packaging 3-1 - Stock - B4B	1 pcs	7/2/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
180	QC 21 - SA	1 pcs	7/2/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

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AUG 09 2019

Part Op 100 - (Chemical Conversion Coat per QSI005 4.1), ***PRIOR TO CHEMICAL CONVERSION*** SCRIBE DART P/N AND Descriptions: B/N ON INSIDE OF CUFF PER QSI 044 6.4

110 - (QC7-Inspect Chemical Conversion Coat)

120 - (Assemble as per dwg), INSTALL THREADED ROD AS PER DWG AND APPLY LOCKTITE 263 (NOTE 9) AND SEAL BETWEEN THE NUT AND CROSSTUBE USING SEALANT(NOTE10) 138857

140 - (Spray Paint / NDT Room), ***MASK PRIOR TO PRIME AND PAINT AS PER NOTE11, BOTH ENDS*** 1- PRIME INSIDE AND OUTSIDE PER QSI005 4.2.1.3.3 (FLOAT SKIDTUBE PRIMER) BATCH: 8189559 2- PAINT OUTSIDE SURFACE AS PER QSI005 4.2.2.4 (FLOAT SKIDTUBE PAINT) BATCH: 5194315 3- COAT INSIDE SURFACE WITH LPS PROCYON AS PER DWG, QSI005 4.8 4- AFTER FINISH APPLY A 1 INCH CENTER LINE ON TOP OF CROSSTUBE WITHIN 0.1" OF CENTERLINE QSI 044 6.1(SEE NOTE 12 AND 13)

150 - (QC14- Inspect Spray Paint)

155 - ***CROSSTUBE*** ASSEMBLE AS PER DWG NOTE 13. USE SOAP AND WATER IF NECESSARY AS PER DWG NOTE 14. TORQUE BOLT TO 50-70 IN-LBS AS PER NOTE 13.

160 - QC7-Inspect Chemical Conversion Coat

170 - (Identify as per dwg & Stock Location:_____)

180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D135-1027-153	Mid Height Fwd Crosstube - DO NOT USE	1 pcs (1 ea)	100-Crosstubes - 1	
D5511-1	Threaded Rod	2 pcs (2 ea)	100-Crosstubes - 1	
MS35650-304	Nut	4 Ea (4 ea)	100-Crosstubes - 1	
NAS1149D0363J	Washer	4 Ea (4 ea)	100-Crosstubes - 1	
D5411-1	Rubber Bushing	2 pcs (2 ea)	155-Handfinish - 4-2-Assembly-B4B	F151241
D5412-041	Crosstube Clamp Assembly	2 pcs (2 ea)	155-Handfinish - 4-2-Assembly-B4B	5044790
D5413-1	Crosstube Support	2 pcs (2 ea)	155-Handfinish - 4-2-Assembly-B4B	5043821
D5414-1	Support Bolt	4 pcs (4 ea)	155-Handfinish - 4-2-Assembly-B4B	5035407

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Crosstubes - 1	D135-1027-153 5164578	①	5	0
	D5511-1 5192214	②	8	0
	MS35650-304 5155670	④	101	0
	NAS1149D0363J 5126575	④	1,169	0
155-Handfinish - 4-2-Assembly-B4B	D5411-1 F151241	②	73	0
	D5412-041 5044790	②	40	0
	D5413-1 5043821	②	29	0
	D5414-1 5035407	④	44	0

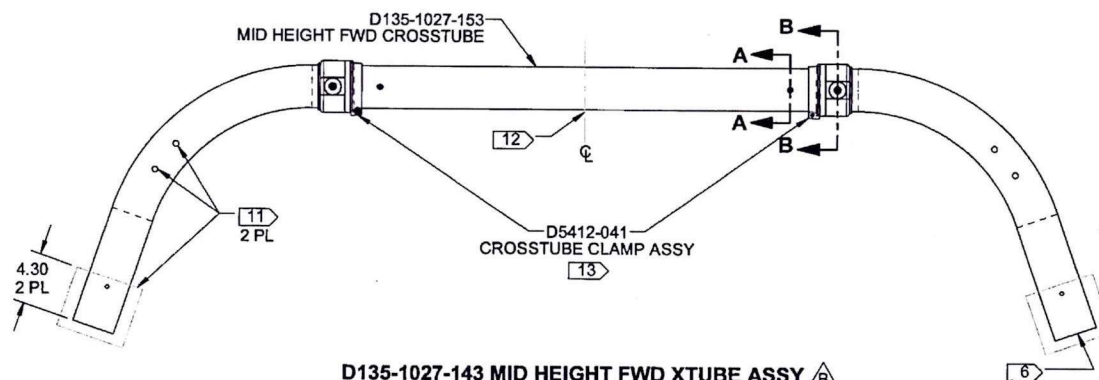
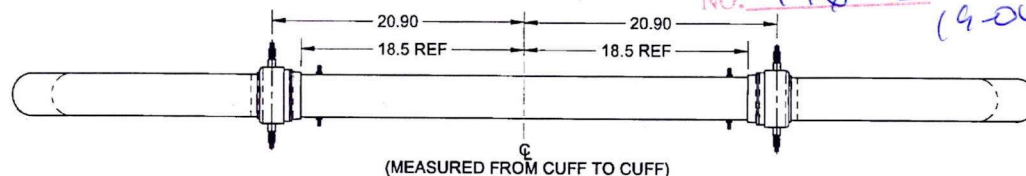
Part Specifications

Specifications could not be found.

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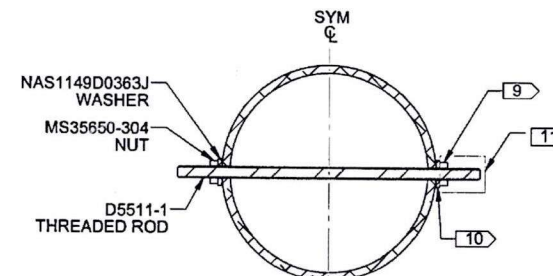
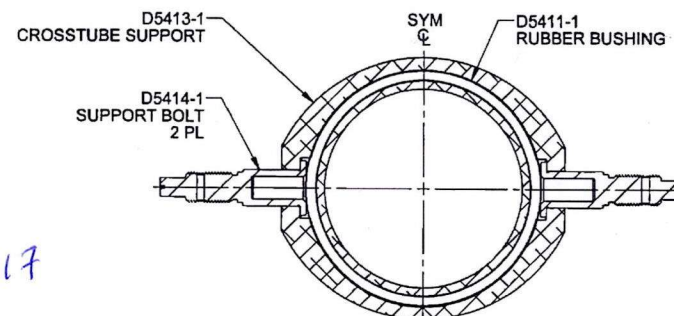
QTY -143	P/N	DESCRIPTION
X	D135-1027-143	MID HEIGHT FWD XTUBE ASSY
1	D135-1027-153	MID HEIGHT FWD CROSSTUBE
2	D5411-1	RUBBER BUSHING
2	D5412-041	CROSSTUBE CLAMP ASSY
2	D5413-1	CROSSTUBE SUPPORT
4	D5414-1	SUPPORT BOLT
2	D5511-1	THREADED ROD
4	MS35650-304	NUT
4	NAS1149D0363J	WASHER

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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 196580 MJS
19-06-17



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT BARE TUBE PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PRIOR TO SUPPORT INSTALLATION PER DART QSI 005 4.2.1.3.3 (FLOAT SKIDTUBE PRIMER)
PAINT OUTSIDE PRIOR TO SUPPORT INSTALLATION PER DART QSI 005 4.2.2.4 (FLOAT SKIDTUBE PAINT)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART P/N "D135-1027-143" AND B/N ON INSIDE OF CUFF PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 18.40 LBS
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE.
- 9) PRIOR TO PRIME AND PAINT, APPLY 1 DROP OF LOCKTITE 263 TO THE MATING THREADS OF D5511-1 IMMEDIATELY PRIOR TO INSTALLING AND TORQUING THE MS35650-304 NUT TO 5-10 IN-LBS
- 10) PRIOR TO PRIME AND PAINT, FILLET SEAL USING PR1422 B1/2 OR P/S-890 B1/2 SEALANT
- 11) MASK PRIOR TO PRIME AND PAINT
- 12) AFTER FINISHING MARK THE ENTIRE CIRCUMFERENCE OF THE CROSSTUBE CENTERLINE (± 0.1) PER QSI 044 6.1
- 13) PRESS D5412-041 CROSSTUBE CLAMP TIGHT AGAINST D5411-1 RUBBER BUSHING THEN TORQUE BOLT TO 50-70 IN-LBS
- 14) IT IS ACCEPTABLE TO USE MILD SOAP AND WATER OR A SMALL AMOUNT OF WATER BASED LUBRICANT TO INSTALL THE SUPPORTS



RELEASED

2018 OCT 31
EN 18-934

B	ADDED D5411-1, D5412-041, D5413-1, AND D5414-1 UPDATE NOTES, ADDED SECTION B-B	ZF	18.10.04
A	NEW ISSUE	AJS	17.07.10
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	ZF		
CHECKED	MW		
MFG. APPR.	DD		
APPROVED	NO		
DE APPR.	CP		
DATE	18.10.04		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D135-1027-143
REV. B
SHEET 1 OF 1
SCALE
TITLE
MID HEIGHT FWD XTUBE ASSY
NTS

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Change Record

PAGE 1 OF 1

Part Number: D135-1027-143

Description: MID HEIGHT FWD CROSSTUBE ASSEMBLY

[illegible]